

IN THE CLAIMS

Claims 1-9 and 11 are pending in this application. Please cancel claim 10 without prejudice or disclaimer, and amend claims 1, 6, 7, and 11 as follows:

1. (Currently Amended) A camera module of a lens integrated type ~~incorporating~~ comprising:

a lens[.];

an image sensor; and

an image processing circuit, the image processing circuit comprising a horizontal direction counter, a horizontal center position setting unit, a first adder, a first absolute value converter, a vertical direction counter, a vertical center position setting converter, a second adder, and a second absolute value converter,

wherein said image processing circuit has correction means using, as a correction value, a value obtained by raising the distance from the central axis of an optical system including said lens to the second power to correct a light intensity corresponding to the pixel position of said image sensor.

2. (Original) The camera module according to claim 1, wherein said correction means obtains said correction value by adding a value obtained by raising the distance from the central axis of said optical system in the horizontal direction to the second power and a value obtained by raising the distance from the central axis of said optical system in the vertical direction to the second power.
3. (Original) The camera module according to claim 2, wherein said correction means obtains said correction value by concentric distance computation by adding a value obtained by raising the distance from the central axis of said optical system in the horizontal direction to the second power and a value obtained by raising the distance from the central axis of said optical system in the vertical direction to the second power.
4. (Original) The camera module according to claim 3, further comprising a nonvolatile memory storing said correction value as a function corresponding to the characteristic of an optical system including said lens.

5. (Original) The camera module according to claim 3, further comprising a volatile memory rewritable from outside and storing said correction value as a function corresponding to the characteristic of an optical system including said lens.
6. (Currently Amended) A camera module of a lens integrated type ~~incorporating~~ comprising:
- a lens[$[\cdot, \cdot]$];
 - an image sensor; and
 - an image processing circuit, the image processing circuit comprising a horizontal direction counter, a horizontal center position setting unit, a first adder, a first absolute value converter, a vertical direction counter, a vertical center position setting converter, a second adder, and a second absolute value converter,
- wherein said image processing circuit has correction means using, as a correction value, a value obtained by concentric distance computation from the central axis of an optical system including said lens to correct a light intensity corresponding to the pixel position of said image sensor.
7. (Currently Amended) A camera module of a lens integrated type ~~incorporating~~ comprising:
- a lens[$[\cdot, \cdot]$];
 - an image sensor; and
 - an image processing circuit, the image processing circuit comprising a horizontal direction counter, a horizontal center position setting unit, a first adder, a first absolute value converter, a vertical direction counter, a vertical center position setting converter, a second adder, and a second absolute value converter,
- wherein said image processing circuit has correction means using, as a correction value, a value obtained by multiplying a value obtained by raising the distance from the central axis of an optical system including said lens in the horizontal direction to the second power or a value obtained by raising the distance from the central axis of said optical system in the vertical direction to the second power by a predetermined coefficient to correct a light intensity corresponding to the pixel position of said image sensor.

8. (Original) The camera module according to claim 7, wherein said correction means uses, as a correction value, a value obtained by multiplying the other of a value obtained by raising the distance from the central axis of said optical system in the horizontal direction to the second power or a value obtained by raising the distance from the central axis of said optical system in the vertical direction to the second power by a predetermined coefficient.
9. (Original) The camera module according to claim 7, wherein said correction means uses, as a correction value, a value obtained by multiplying a value of the distance from the central axis of said optical system in the vertical direction or a value of the distance from the central axis of said optical system in the horizontal direction, of the other of a value obtained by raising the distance from the central axis of said optical system in the horizontal direction to the second power and a value obtained by raising the distance from the central axis of said optical system in the vertical direction to the second power by a predetermined coefficient.
10. (Canceled).
11. (Currently Amended) The camera module ~~according to claim 10~~ of a lens integrated type, comprising:
 a lens;
 an image sensor;
 an image processing circuit, the image processing circuit comprising a horizontal direction counter, a horizontal center position setting unit, a first adder, a first absolute value converter, a vertical direction counter, a vertical center position setting converter, a second adder, and a second absolute value converter; and
 selection means selecting the output of said image sensor and the output of said image processing circuit for output,
 wherein said image processing circuit has correction means correcting a light intensity corresponding to the pixel position of said image sensor according to the distance from the central axis of an optical system including said lens.